SAN GORGONIO HYDROELECTRIC SYSTEM, EAST FORK DAM AND INTAKE
San Bernardino National Forest
Banning vicinity
Riverside County
California

HAER CA-2278-A
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN ENGINEERING RECORD

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HAER No. CA-2278-A

Location: The East Fork Dam and Intake are the northeast most elements of the San Gorgonio Hydroelectric System. They are located along the East Fork of the South Fork Whitewater River, northeast of the South Fork Diversion Dam, within the San Bernardino County portion of the system. They are located in Section 19; T.1S., R.2E. on the San Gorgonio Mountain USGS topographic map. The East Fork Dam is located at latitude: 34.062341, longitude: -116.807910. The coordinate represents the center of the East Fork Dam structure. This coordinate was obtained June 30, 2010 using a GPS mapping grade unit accurate to +/- 3 meters after differential correction. The coordinate's datum is North American Datum 1983. The East Fork Dam location has no restriction on its release to the public.

Significance: The East Fork Dam and Intake are contributing features to the San Gorgonio Hydroelectric System. The system itself was found to form a locally significant district of resources with a high degree of integrity eligible for listing in the National Register of Historic Places under Criteria A and C. The system was found eligible under Criterion A, for its representation of 1920s hydroelectric development in southern California and the system was also found to be eligible under Criterion C for architecture and engineering. In terms of engineering the system is significant for its use of tanks rather than forebays, which represented a departure from typical western hydroelectric systems, using a technique more common to the eastern United States and its utilization automatic controls which were a new innovation in the 1920s and later became an industry standard. Additionally, in terms of architecture, the two powerhouses were found to be good examples of utilitarian structures influenced by Classical Revival style architecture.

Description: The East Fork Dam and Intake is located on the east side of Whitewater River. The east fork of the Whitewater River is diverted using a concrete water diversion (East Fork Dam); the dam is approximately 14' high and is constructed with native rock and mortar. A metal grate captures water on the upper sloped side of the dam. From the grate, the water flows into a poured concrete valve box via an underground waterway measuring approximately 30' in length. A metal slide gate at the valve box measuring 24" in diameter controls the flow of the water. From the valve box, the water goes through a poured concrete flowline (canal) that takes the water to a "sandbox" measuring approximately 12' x 15'; the box is constructed of poured concrete and is used to remove sand and debris. The water then flows into an adjacent "gauging station" used to measure the volume of the water using a porcelain water gauge affixed to the inner part of the station. The water is measured by cubic feet per second. A drain gate removes silt that builds up in the gauging station. The water then exits the station through a sharp edge weir. Just after the gauging station, a section of the east fork flowline, which measures approximately 232 feet long, was washed out in the 1938 flood and replaced with a spiral weld steel pipe in circa late 1930s. The above ground pipe measures 16" in diameter and is suspended via a suspension cable system. The system is supported by two steel "A" frame supports that are placed at each end of the pipe. There are a total of 19 steel cables attached to the pipe via connectors fastened to flanges and the cables are held by a single

steel cable that runs the length of the pipe and is attached to each "A" frame support. The pipe then empties into a flowline that travels southwesterly to the Black Wheel (Creek). From here the flowline travels to Raywood Flats where it fills Tank No. 1, which collapsed in 1998 and was subsequently dismantled.

History: The San Gorgonio Hydroelectric System was constructed from 1911-1923. The flowlines were completed by 1913 and the East Fork Dam and Intake were completed by 1923. The engineer for the project was Charles O. Poole and the contractor was C.D. Sotiras. In 1938, a section of the flowline near the east fork diversion dam was washed out and replaced with steel pipes; other than this replacement there appears to be no additional alterations made to the East Fork Dam or Intake. Please see the Historic Context section in the general Historic American Engineering Record for the San Gorgonio Hydroelectric System (HAER No.CA-2278) for additional information.

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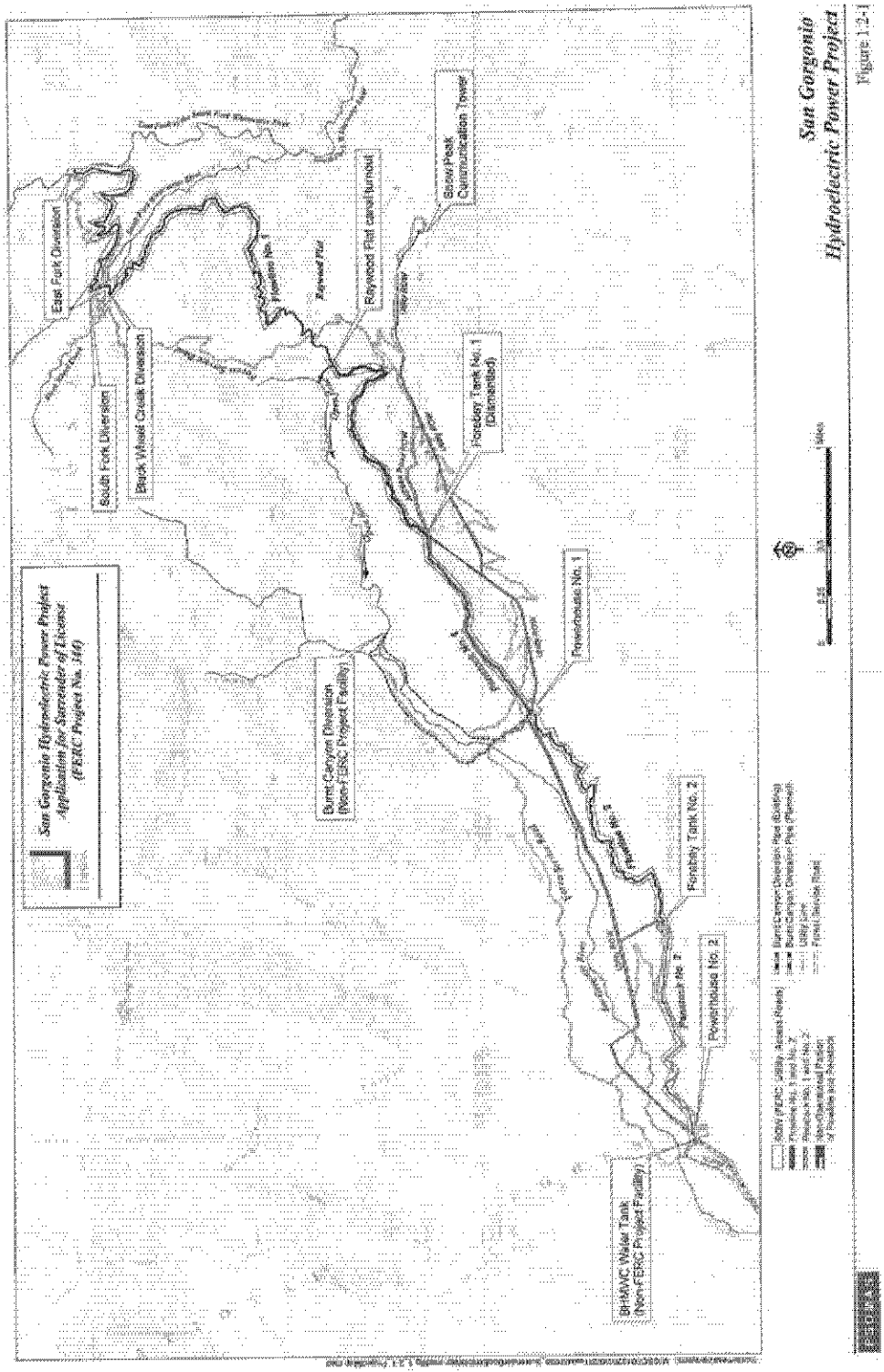
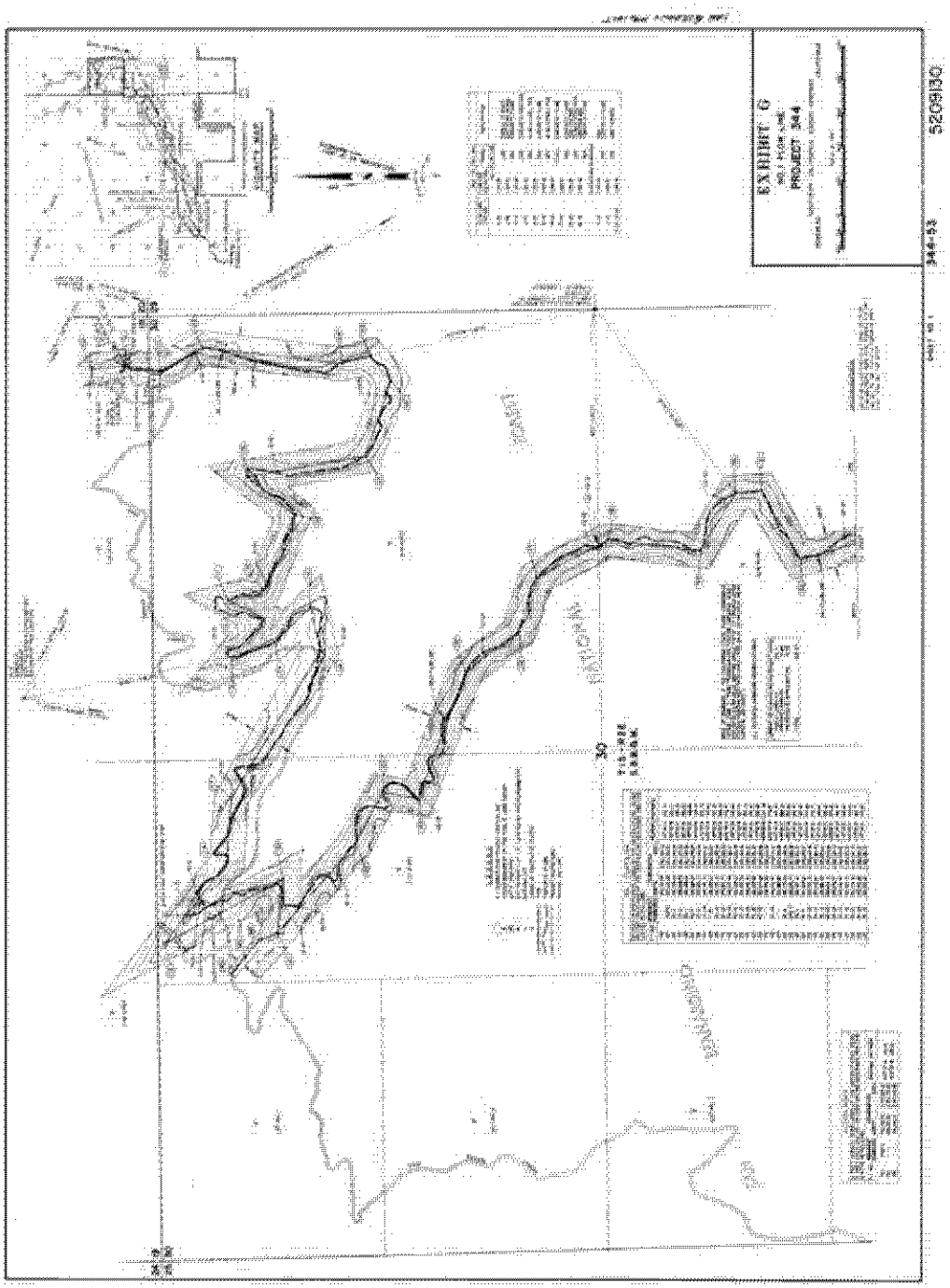
Historian: Ben Taniguchi, Historian, and Nicole Collum, Architectural Historian II, Galvin Preservation Associates, 1611 S. Pacific Coast Highway, #104, Redondo Beach, CA 90277, 2009-2010.

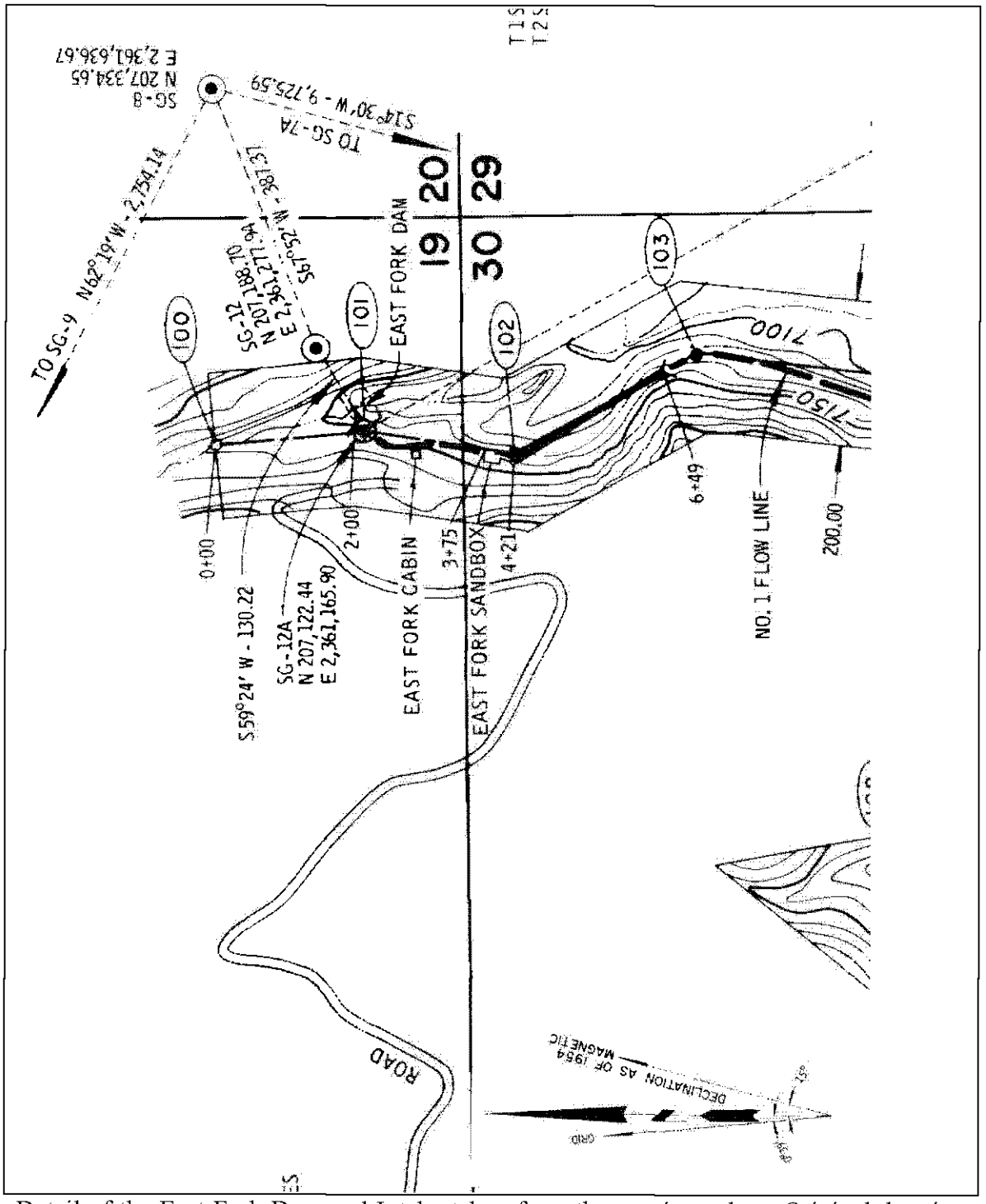
Project Information: SCE is planning to decommission the project's two power plants and part of their appurtenant water conveyance system. Some of the project components are scheduled to be decommissioned and removed, decommissioned and abandoned in place, or transferred to new ownership. The hydroelectric generators and other pieces of hardware and equipment will be removed from the powerhouse buildings, but the buildings will remain. Components slated for removal will be demolished using bulldozers where present access exists and other components will be removed using hand crews where there is no present vehicle access. The San Gorgonio Pass Water Agency plans to acquire those project facilities that are not decommissioned and use these remaining facilities to continue to divert and transport water for domestic and irrigation purposes to customers of the Banning Heights Mutual Water Company and the city of Banning. The transferred facilities would no longer be used for the generation of power. As a result of this project the San Gorgonio Hydroelectric System was documented with Historic American Engineering Records. The entire system was documented in an overview report, San Gorgonio Hydroelectric System HAER No. CA-2278 and each contributing element of the system was documented with separate supporting reports as follows: San Gorgonio Hydroelectric System, East Fork Dam and Intake, HAER No. CA-2278-A; San Gorgonio Hydroelectric System, South Fork Dam and Intake, HAER No. CA-2278-B; San Gorgonio Hydroelectric System, Powerhouse No. 1, HAER No. CA-2278-C; San Gorgonio Hydroelectric System, Tank No. 1 and Penstock No. 1, HAER No. CA-2278-D; San Gorgonio Hydroelectric System, Operator's Bungalow, HAER No. CA-2278-E; San Gorgonio Hydroelectric System, Operator's Garage, HAER No. CA-2278-F; San Gorgonio Hydroelectric System, Powerhouse No. 2, HAER No. CA-2278-G; San Gorgonio Hydroelectric System, Flowline No. 2, Tank No. 2, & Penstock No. 2, HAER No. CA-2278-H.



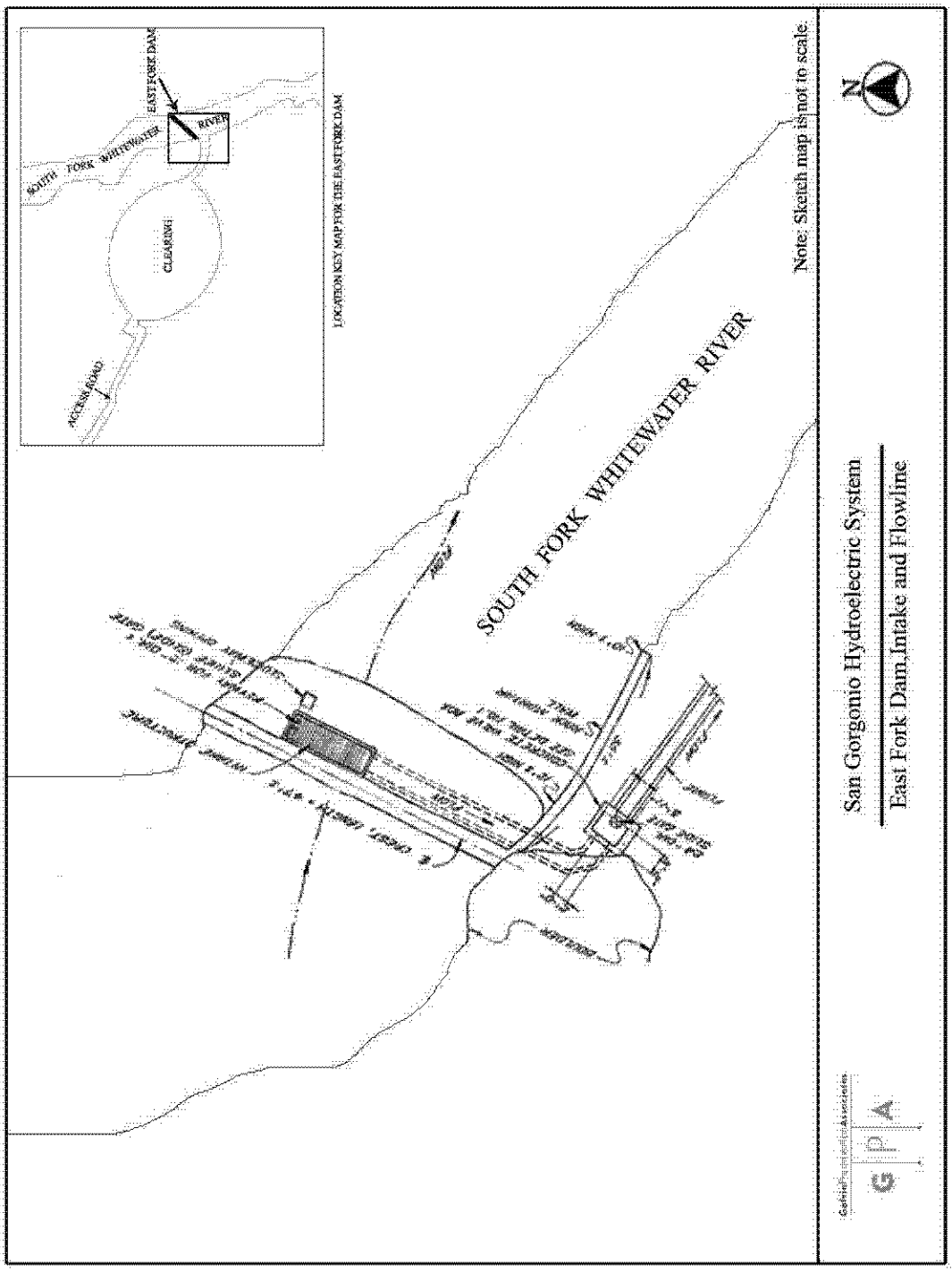
Reduced size overview map of the San Gorgonio Hydroelectric System. Map courtesy of Southern California Edison Company.



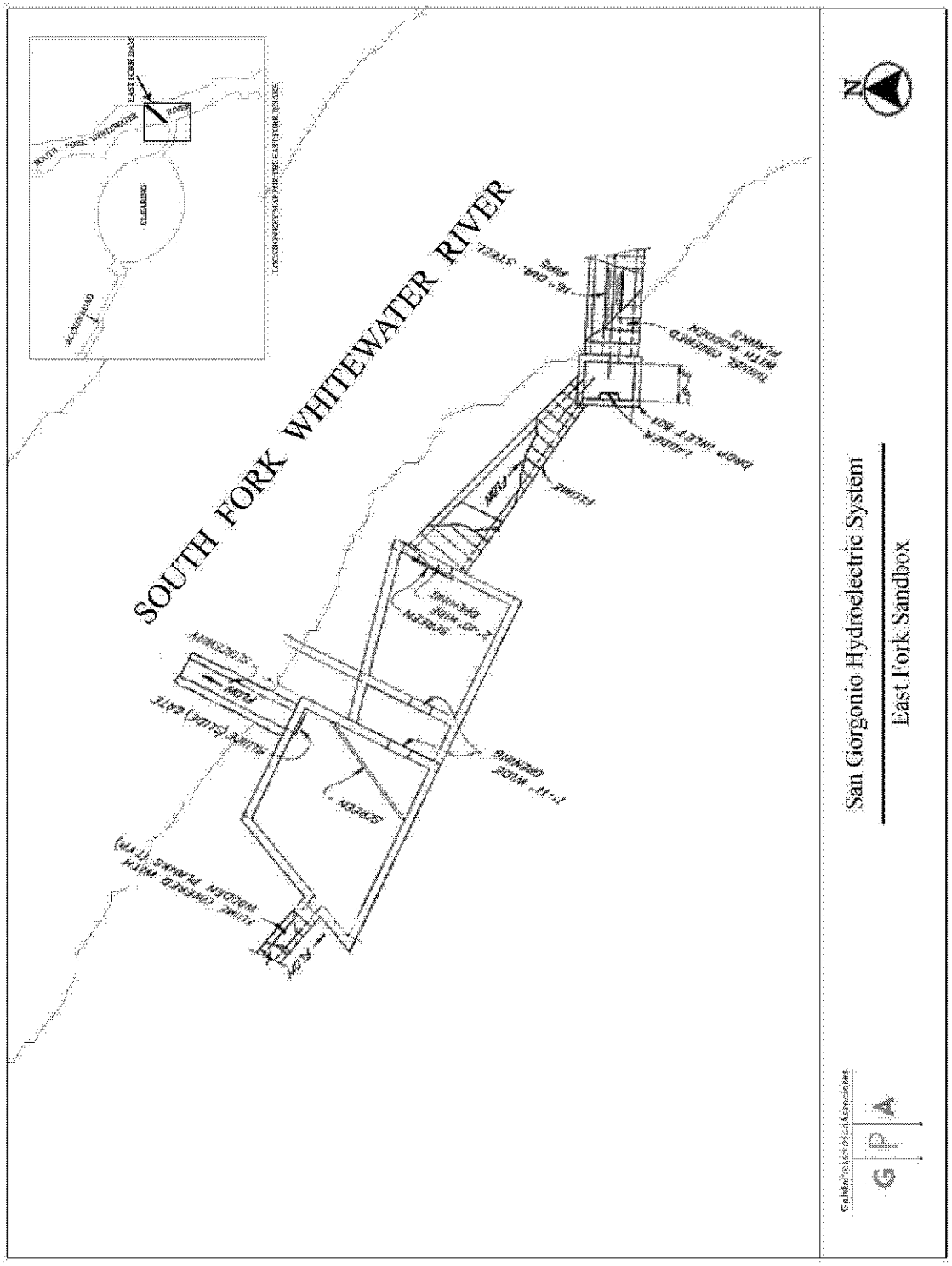
Reduced size plan of Flowline No. 1 located just below the South Fork Dam. The East Fork Dam is also visible to the northeast. Drawing courtesy of Southern California Edison Company. Full size image available in the Field Records Section of the HAER for the San Gorgonio Hydroelectric System, HAER No. CA-2278.



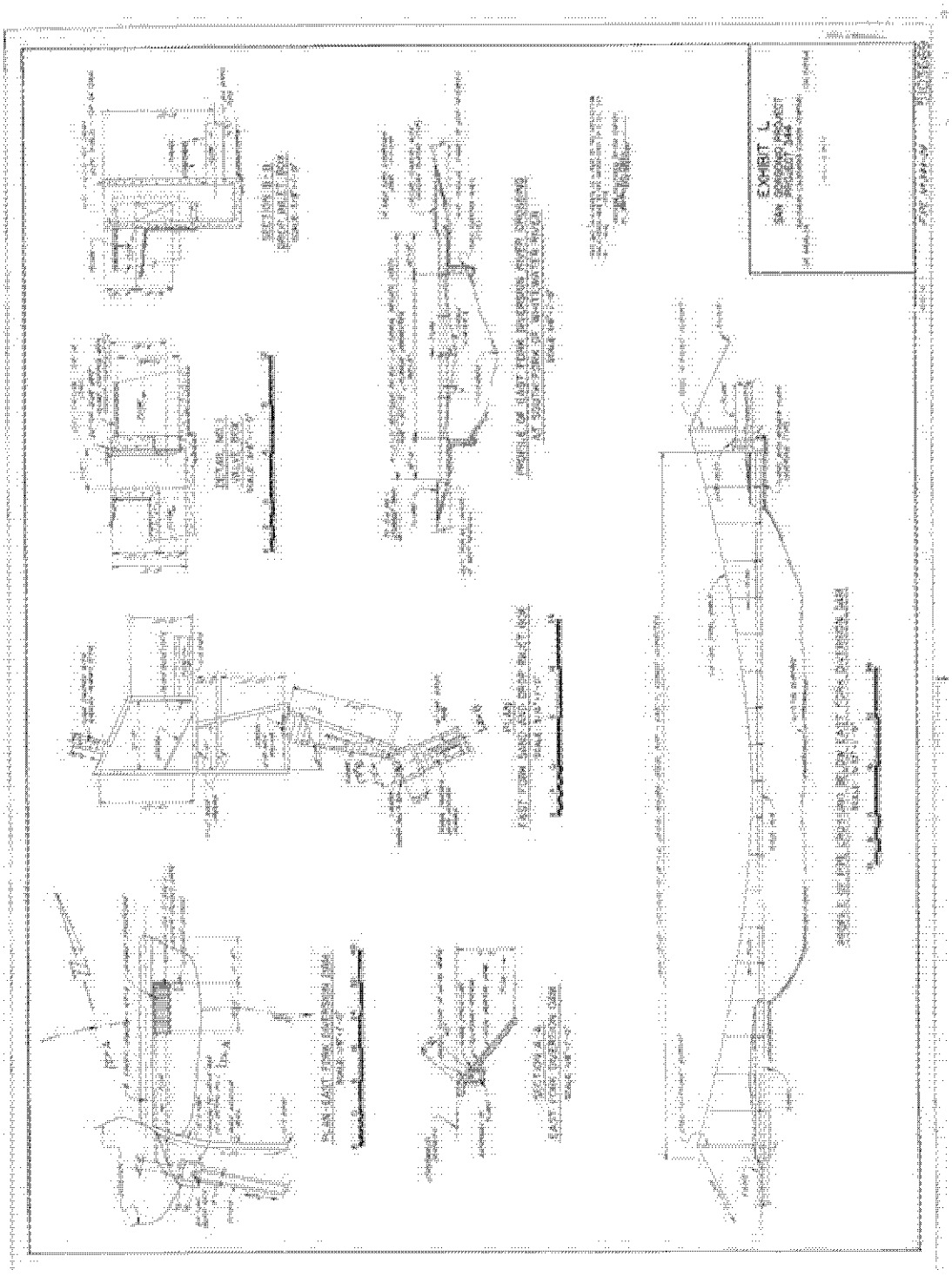
Detail of the East Fork Dam and Intake taken from the previous plan. Original drawing courtesy of Southern California Edison Company.



Site plan for the East Fork Dam Intake and Flowline. Site plan created by Galvin Preservation Associates 2010.



Site plan for the East Fork Sandbox. Site plan created by Galvin Preservation Associates 2010.



Reduced size image of East Fork Dam, Intake, and Flowline Pipe Crossing. Drawing courtesy of Southern California Edison. Full size image available in the Field Records Section of the HAER for the San Gorgonio Hydroelectric System, HAER No. CA-2278.